

AUG - 7 2001

K011695

**510 (k) Summary of Safety And Effectiveness**

Applicant name and address:	Collagen Matrix, Inc. 509 Commerce Street Franklin Lakes, NJ 07417
Contact person and telephone number:	Shu-Tung Li, Ph.D. President & CEO Tel: (201) 405-1477
Date of summary:	May 24, 2001
Device generic name:	Collagen Dental Membrane
Device trade name:	None
Predicate device:	BioGide®, [510(k) #K960724]

**Description of the device:**

The Collagen Dental Membrane is a resorbable, type I collagen matrix of defined geometry, *in vivo* stability, permeability and mechanical strength for use as a material to aid in wound healing in bone repair, ridge augmentation and dental implant procedures.

The device is provided in two sizes 20 mm x 30 mm and 30 mm x 40 mm. The device can be easily trimmed for a final fit during surgery to the appropriate size and shape required for the defect to be treated.

Intended Use of the Device

Collagen Dental Membrane is intended for use in oral surgical procedures as a resorbable material for placement in the area of dental implant, bone defect or ridge augmentation to aid in wound healing post surgery.

Technical Characteristics

Collagen Dental Membrane has been designed in accordance with the accepted principles of guided bone regeneration (GBR) as a wound healing material post surgery.

Specifically, the device is designed to be resorbable, biocompatible, cell occlusive, clinically manageable, and suturable.

#### Summary of Biocompatibility Studies

The Collagen Dental Membrane is biocompatible based on the tests recommended by the FDA.

#### Summary of *In Vivo* Resorption Studies

*In vivo* resorption time for the Collagen Dental Membrane was evaluated in a rat subcutaneous implantation model. The results of the studies showed that Collagen Dental Membrane has an *in vivo* resorption time from 26 to 38 weeks.

#### Summary of Effectiveness Data

##### *Animal Data*

The concept of “Guided Bone Regeneration (GBR)” in bone repair, ridge augmentation and dental implant surgeries has been proven from animal model studies. That is, during the surgery, a barrier membrane is placed over the bone, ridge or dental implant to retard and/or prevent the down growth of epithelium, and to prevent the contact of gingival connective tissue with the implant and bony surface. Thereby, bone cells can grow into the defect site to fill the defect space or integrate with the dental implant for a firm anchor of the implant within the bone socket.

A comprehensive literature search showed that numerous materials have been studied as a barrier in the GBR studies in various animal models. The animal data provided evidence that the concept of GBR using membranes as a barrier to aid in wound healing has been verified using either resorbable or non-resorbable membranes is a valid approach.

##### *b. Summary of Clinical Data*

Results from human studies from the literature are consistent with animal studies. Similar to animal studies, the materials studied thus far, resorbable and nonresorbable,

are both effective as a barrier to aid in wound healing in dental implant, ridge augmentation and bone repair procedures.

### Conclusion

Thus, based on the biocompatibility testing conducted on the Collagen Dental Membrane and literature research on the various membranes, we conclude that the Collagen Dental Membrane is safe for implantation and is effective as a resorbable membrane to aid in wound healing post dental implant, bone repair and ridge augmentation surgeries. The Collagen Dental Membrane is substantially equivalent to BioGide®.



Food and Drug Administration  
9200 Corporate Boulevard  
Rockville, Maryland 20850

OCT 10 2007

Mr. Shu-Tung Li  
President  
Collagen Matrix, Incorporated  
509 Commerce Street  
Franklin Lakes, New Jersey 07417

Re: K011695  
Trade Name: Collagen Dental Membrane  
Regulation Number: 872.3930  
Regulation Name: Bone Grafting Material  
Regulatory Class: 2  
Product Code: NPL  
Dated: May 30, 2001  
Received: May 31, 2001

Dear Mr. Li:

This letter corrects our substantially equivalent letter of August 7, 2001.

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

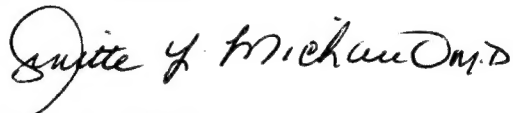
If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (sections 531-542 of the Act); 21 CFR 1000-1050.

This letter will allow you to continue marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Office of Compliance at (240) 276-0115. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (240) 276-3150 or at its Internet address <http://www.fda.gov/cdrh/dsma/dsmamain.html>

Sincerely yours,



Chiu Lin, Ph.D.

Director

Division of Anesthesiology, General Hospital,

Infection Control and Dental Devices

Office of Device Evaluation

Center for Devices and

Radiological Health



*Protecting and Promoting Public Health*

510(k) Number (if known):

K011695

Device Name: Collagen Dental Membrane

Indications for Use:

Collagen Dental Membrane is intended for use in oral surgical procedures as a resorbable material for placement in the area of dental implant, bone defect or ridge augmentation to aid in wound healing post surgery.

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED)

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Concurrence of CDRH, Office of Device Evaluation (ODE)

Prescription Use ☒  
(Per 21 CFR 801.109)

OR

Over-The-Counter Use

(Optional Format 1-2-96)

Merald W. Shipp for M5R  
(Division Sign-Off)

Division of Dental, Infection Control,  
and General Hospital Devices

510(k) Number K011695